REMARKS

As requested by the MPEP 2001.06 and mentioned in the non-provisional application, Applicants point out to the Examiner that they have several co-pending applications in same general art filed on September 20, 2001:

Serial No. 09/960,641 entitled INTEGRATED NETWORK MANAGEMENT SYSTEM;

Serial No. 09/960,270 entitled IMPROVED FILE NAMING SYSTEM WITH TRACKING AND DIAGNOSTIC FEATURES IN A CONTENT DELIVERY SYSTEM;

Serial No. 09/960,650 entitled ARCHITECTURE FOR DELIVERING VIDEO AND OTHER DATA AT HIGH BANDWIDTHS;

Serial No. 09/960,637 entitled MOBILE NODE FOR SATELLITE BASED CONTENT DELIVERY SYSTEM;

Serial No. 09/960,649 entitled MICRONODE IN A SATELLITE BASED CONTENT DELIVERY SYSTEM;

Serial No. 09/960,249 entitled SCALABLE IP ADDRESSING SCHEME FOR MULTIPLE NOCs AND EDGE NODES;

Serial No. 09/960,843 entitled EDGE NODE ARRANGEMENT IN A SATELLITE BASED CONTENT DELIVERY SYSTEM;

Serial No. 09/960,622 entitled GLOBAL OR MULT-REGION CONTENT DELIVERY SYSTEM;

Serial No. 09/960,603 entitled END TO END SIMULATION OF A CONTENT DELIVERY SYSTEM;

Serial No. 09/960,605 entitled LARGE EDGE NODE FOR SIMULTANEOUS VIDEO ON DEMAND AND LIVE STREAMING OF SATELLITE DELIVERED CONTENT;

Serial No. 09/960,263 entitled MOBILE NETWORK OPERATIONS CENTER FOR SATELLITE BASED CONTENT DELIVERY SYSTEM;

Serial No. 09/960,246 entitled SCALABLE EDGE NODE;

Serial No. 09/960,645 entitled NETWORK OPERATION CENTER ARCHITECTURE IN A HIGH BANDWIDTH SATELLITE BASED DATA DELIVERY SYSTEM FOR INTERNET USERS;

Serial No. 09/960,636 entitled FORWARD CACHE MANAGEMENT BETWEEN EDGE NODES IN A SATELLITE BASED CONTENT DELIVERY SYSTEM; and

Serial No. 09/960,649 entitled MICRONODE IN A SATELLITE BASED CONTENT DELIVERY SYSTEM.

Claim Objections

Claims 1, 6, 7, and 8 have now been amended to resolve any issues with respect to abbreviations or acronyms. The acronym NOC has been defined in all four independent claims as Network Operations Center. Furthermore, the acronym VLAN has been defined in claims 1 and 7 as Virtual Local Area Network.

Applicants believe that the claim objections have now been overcome.

Section 112 Rejections

The Examiner has objected to the use of "an attach display", and "an attack display" in Claim 8. There is no such language in Claim 8. In a telephone conversation on March 9, 2005, the Examiner indicated that this language appears in Claim 7. However, there is no such wording in the original filing for claim 7 either. A copy of the corresponding page of the original filing has been attached to this document for the Examiner's reference with the relevant language circled. This page shows that claim 7 as filed only includes an "attached display".

The Examiner has also objected to the use of "worldwide electrical power connections" in Claim 5. This claim has been deleted.

Applicants believe that the Section 112 rejections have now been overcome.

Section 102 Rejections

The Examiner has rejected Claim 6 under Section 102(e) as being anticipated by Rodriguez et al. (U.S. Application Publication No. 2002/0059623). Applicants respectfully disagree with the Examiner's analysis of Rodriguez.

To anticipate Claim 6, Rodriguez "must teach every element of the claim" (MPEP § 2131) and "the identical invention must be shown in as complete detail as contained...in the claim." *Richardson v. Suzuki Motor Co.,* 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Rodriguez does not meet these requirements as demonstrated below.

The Examiner states that "Rodriguez discloses an edge node that (fig. 1, item 14) that receives content from a NOC (item 22) via a satellite link and displays it

(col. 2, lines [0019])...". Item 14 of Figure 1 in Rodriguez is a **DHCT** (digital home communication terminal), not an **edge node** as described by Applicants' claim elements. A home communication terminal (HCT) is a device also known as a set-top box that is used "for accessing and receiving video services and navigating a subscriber through a maze of service available" (Rodriguez, page 1, para 4). The digital version, the DHCT, supports "an increasing number of services which include digital two-way communication" (Rodriguez, page 1, para 4) over a single integrated network for TV subscribers. It does not include a display interface for displaying the received content. Instead, it contains "at least one output system 124 for driving the television display 341" (Rodriguez, page 7, para 55). The television display 341 is an external device, and not part of the DHCT.

By contrast, Applicants' **edge node** has no two-way communications via satellite (the network element for content transmission in Applicants' invention) – the back channel, BC 600 in Applicants' specification, is by a separate terrestrial network. Nothing in Rodriguez anticipates a separate network for the return path from the receiver to the content source. Applicants' edge node also includes a display interface for displaying the received content. Nothing in Rodriguez anticipates a display incorporated as part of the DHCT either.

Lastly, Rodriguez's DHCT receives its content from a headend which serves to collect content for distribution into the digital broadband delivery system (DBDS). As stated in Rodriguez's paragraph 23, "Also in communication with the headend 26 is a Network Operation Center (NOC) 22, which is an external management center interfaced with the DBDS 10 to allow for remote operation of the system."

Applicants have no such distinct headend. Instead, Applicants' NOC serves both as the management center and the collection point for content to be delivered to the edge node. Nothing in Rodriquez suggests that these two functions can be combined into a single entity.

Therefore, Applicants believe that Rodriguez did not anticipate Applicants' claim 6 and respectfully request that it be reconsidered.

Section 103 Rejections

The Examiner has rejected claims 1-3 under Section 103(a) as being unpatentable over Rodriguez in view of Specht (US No. 6,414,958). Applicants respectfully disagree with the Examiner's analysis.

Examiner states that Rodriguez "discloses an edge node (Fig.1) comprising: one or more media servers capable of simultaneously serving both live and non-live content (col. 2; lines [0019])

a Network, connected to the media servers, that receives content from a NOC (item 22) via a satellite link and distributes it to the media servers;

a computer with an attached display screen; and a Network, connected to the media servers, that transmits the content from the media servers to the computer (co. 5, lines [0039])."

However, the Examiner's statement that Rodriguez discloses an edge node as used in Applicants' invention is in error. Rodriquez's Figure 1 is not a diagram of an edge node.. Instead, it "shows a block diagram of an example Digital Broadband Delivery System (DBDS) including an example Digital Home Communication Terminal

(DHCT) and an example headend, according to one embodiment of the invention" (page 1, para. 9). This system is not an edge node as that term is used in Applicants' invention. It is "composed of interfaces to Content Providers 18, Network Operations Centers (NOC) 22, core networks 30 of headends 26, hubs 34, Hybrid Fiber/Coax (HFC) Access Networks 38, and subscriber DHCTs 14" (page 2, para 20). In other words, it is a content delivery network, comprised of multiple systems at various locations from a transmission facility, from headend 26 through a regional network to multiple receivers to DHCT 14. It is not a single node at a single location like Applicants' edge node. According to the online dictionary Webopedia, a node is "In networks, a single processing location."

This characteristic of Applicants' edge node is described in the Edge Node section of the Detailed Description of the Preferred Embodiments. There is nothing in Applicants' specification to suggest the elements of Applicants' edge node are the geographically dispersed collection of elements as Rodriguez's DBDS10. As stated in the Edge Node section of the Detailed Description of the Preferred Embodiments, "An EN [edge node] can be designed to be mobilized or portable". Rodriguez's DBDS 10 of headends, HFC Access networks, hubs, etc. can't be portable and, therefore, is different from Applicants' edge node.

As explained in MPEP § 2141.02, Applicants' invention must be considered in its entirety including properties disclosed in the specification:

> "In determining whether the invention as a whole would have been obvious under 35 U.S.C. 103, we must first delineate the invention as a whole. In delineating the invention as a whole, we look not only to the subject matter which is literally recited in the claim in question ... but also to those properties of the subject matter which are inherent in the subject matter *and* are disclosed in the specification. . . Just as we look to a chemical and its properties when we examine the obviousness

of a composition of matter claim, it is this invention *as a whole,* and not some part of it, which must be obvious under 35 U.S.C. 103." (Citations omitted; underline added).

Therefore, by equating Rodriguez's DBDS 10 with Applicants' edge node, the Examiner has ignored the single location nature of Applicants' edge node as conventionally defined and as delineated in the specification.

Moreover, according to the Examiner's statement, the network of Rodriguez receives content from a NOC that is item 22 of Figure 1, i.e. part of what Examiner states is disclosed by Rodriguez as an edge node. However, according to Rodriguez page 2, para. 23," The Content Provider 18 transmits the content to a headend 26 for further transmission to subscribers downstream in the DBDS 10. Also in communication with headend 26 is a Network Operation Center (NOC), which is an external management center interfaced with the DBDS 10 to allow for the remote operation of the system." Thus, while a NOC is external to Rodriguez's DBDS 10, and Applicants' edge node, Rodriguez's network receives content from a separate element in the system, the headend, not the NOC as the Examiner states. Applicants' edge node receives content from an external NOC only.

According to the MPEP:

"To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP § 2143.03 (emphasis added).

Furthermore,

"All words in a claim must be considered in judging the patentability of that claim against the prior art." (*In re Royka*, 490 F.2d 981)

Because the source of content in Rodriguez is different than Applicants', the limitation of claim 1 regarding content from a NOC is not taught by Rodriguez and demonstrates the Examiner's rejection on the basis of obviousness is incorrect.

The above mentioned passage from Rodriguez also highlights an architectural difference between Applicants' edge node and Rodriguez's DBDS 10. In Rodriguez, after receiving the content, headend 26 transmits the content to subscribers downstream. Rodriguez's Figure 1 shows the complex nature of this transmission path through various hubs and a hybrid fiber/coax network. The public VLAN of Applicants' claim 1 simply directs the content to a single computer with an attached display screen that is part of the edge node, not a multitude of subscribers via a hybrid fiber/coax network as in Rodriguez.

Therefore, even though the Examiner notes that Rodriguez does not disclose VLANs, other limitations of Applicants' claim 1 that describe the composition of the edge node are also not taught by Rodriguez.

They are also not taught by Specht either. Specht's patent is for a switch design: "In accordance with the present invention, a multi-port switch is provided which supports VLAN, has network management and remote monitoring modules, and is secured with or inside a network device connected to one of the ports of the switch" (column 5, lines 61-65). The context of his design is ATM networks for banking applications. These networks are strictly data networks, not for content distribution. Consequently, they do not have edge nodes nor are there NOCs or media servers serving live and non-live content anywhere in Specht's networks. Therefore, it would not be possible to one of ordinary skill in the art to use Specht's VLAN in an edge node that

does not exist in either Specht or Rodriguez, let alone one that comprised media servers, and a computer with an attached display screen.

There are further aspects of Applicants' invention that are not taught by the combination of Rodriguez and Specht. Referring again to MPEP § 2141.02, Applicants' invention must be considered in its entirety.

Applicants' invention is directed to solving a congestion problem for streaming media being transmitted via the Internet as stated in Applicants' Background of the Invention, "However, the network congestion problem has not been improved as expected because internet backbone routing systems have not caught up with the drastic increase of internet traffic." Applicants' edge node is part of the proposed solution as stated in Applicants' Brief Summary of the Invention, "The above-identified problems are solved and a technical advance is achieved by a system of internet broadcasting in which multimedia content is delivered to internet users bypassing most internet backbone."

In contrast to Applicants' invention, nothing in Rodriguez or Specht addresses this problem or solves it. In fact, the traffic from Specht's invention contributes additional traffic to the congestion. Applicants' specification describes the proposed solution bypassing the internet backbone and integrating Applicants' edge node as part of that solution in great detail.

According to MPEP §2143.01, "the prior art must suggest the desirability of the claimed invention." Neither reference suggests the need for a solution to the problem of internet congestion, nor an edge node as part of an internet broadcast system

to solve that problem that specifically implements a satellite bypass as part of the solution.

It is also important to understand that Applicants have combined the benefits of a satellite link, a public VLAN and private VLAN and joined them in a system that takes advantage of their respective unique attributes. As stated in Applicants' Detailed Description of the Preferred Embodiments, Applicants' invention "allows the content providers to bypass most internet congestion points by utilizing a hybrid of satellites and powerful land-based edge nodes." The security of private VLAN receiving the streaming content assures content providers that there can be no unauthorized access to the receiver, even through the public VLAN because they are separated by the media server. At the same time, the public VLAN provides a means for distributing the content to users in a way that can be configured and controlled remotely with ease.

The combination of Rodriguez and Specht does not show the level of detail required by MPEP §2143.03, it doesn't show all of the properties of Applicants' invention as described in the specification and claimed, and it is not capable of solving the internet congestion problem. (See MPEP §2143.01.) Therefore, Applicants respectfully submit that the rejection of claim 1 be reconsidered and the claim be allowed.

The Examiner has also rejected claims 2 and 3 under Section 103(a). Applicant respectfully disagrees. Claims 2 and 3 depend from claim 1 and therefore would not have been obvious for the same reasons that claim 1 would not have been obvious. Furthermore, the wireless interface of Rodriguez in paragraph 98 of column 14 cited by the Examiner is that of a remote control or similar input device for DHCT 14:

"Alternatively, the on-demand request may be generated as a result of pressing a key or sequence of keys on a keyboard or generating a command with an input device. Such invocation results in signals received by receiver 346, or similar input port, be it wired or wireless, that interrupts or signals the processor 110 and provides the viewers input to the processor in a data format that is recognizable by the processor" (page 14, para. 98). This is entirely different from Applicants' public VLAN connection between the media servers and the computer with an attached display screen. Consequently, the limitations of a wireless public VLAN interface with the computer as in Applicants' claim 2 or wired public VLAN interface as in Applicants' claim 3 are not taught in the same detail as required by MPEP §2143.03.

The Examiner has rejected Claims 4 and 7 under Section 103(a) "as being unpatentable over Rodriguez et al. (2002/059623) in vew of Specht et al (US Patent 6,414, 958) as applied to claim 1 above and further in view of Kikinis (2002/0059597). Applicants believe that these claims should be allowed for similar reasons as claim 1 and as further discussed below.

Claim 4 adds the limitation of portability to claim 1. Kikinis's disclosure of a method for notifying a user of an interactive event received by a hand held unit merely is irrelevant to Applicants' invention. According to MPEP 2143.01,

> "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art."

The portability of Kikinis' handheld unit does not in any way relate to the portability of Applicants' edge node, nor does it relate to Rodriguez's DBDS 10 or

Specht's VLANs. Given the complex nature of Rodriguez's DBDS 10, it is impossible to contain the DBDS10 in a portable enclosure, and neither Rodriguez nor any of the other references offer any suggestion as what portion of Rodriguez should be put in the "portable enclosure". By contrast, Applicants' Figure 6 and 7 and the corresponding discussion in the specification detail how an edge node can be built with exemplary hardware that can be contained in a portable enclosure.

The Examiner's own conclusion also shows the lack of relevance of the combination, "It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kikinis's teaching to modify the combined method of Rodriguez and Specht by using a portable enclosure in order to provide an interactive televison system that provides interactive functions and alerts a user of these functions."

Applicants' invention is not an interactive television system, nor do Applicants claim interactive functions. Portability of a television system has nothing to do with portability of an edge node for internet broadcast system.

Considering Kikinis's patent alone shows its lack of relevance to Applicants' invention. His patent "eliminates the problems associated with displaying an EPG [electronic program guide] and programs on the same screen." (page 2, para 18). As subsequently stated in Kikinis's specification "FIG. 1 illustrates an apparatus for displaying an EPG on a display other than the primary display according to one embodiment (page 2, para 19). The concept of portability is then applied later to this separate EPG display as stated in the following, "In another embodiment, an EPG could be displayed on a portable computing device" (page 3, para 35). It should emphasized

that portability is applied only to Kikinis's EPG display, not the primary television display.

This separation of EPG display and television display is a teaching away from Applicants' invention which has only a single computer with an attached display. According to MPEP 2143.01, "The proposed modification cannot render the prior art unsatisfactory for its intended purpose." In suggesting that a combination of Rodriguez, Specht and Kikinis would result in Applicants' edge node of claim 1 with the portability limitation of Applicants' claim 4, the Examiner has rendered Kikinis's invention unusable – there would no longer be a separate display for an EPG and television.

Therefore, for the reasons cited earlier with respect to independent claim 1, the irrelevance of an interactive television system, the lack of a motivation to combine, and the teaching away from Kikinis's invention, Applicants respectfully request that the Examiner reconsider and allow claim 4.

Similarly, the combination of Rodriguez, Specht and Kikinis also fails to make the invention of Applicants' claim 7 obvious. The Examiner has again stated that the combined prior will "provide an interactive television system that provides interactive functions and alerts a user of these interactive functions." As discussed above, an interactive television system has no bearing on Applicants' invention.

Many of the other differences exist for claim 7 as for claims 1 and 4: Rodriguez's discloses a geographically disparate network of elements as opposed to Applicants' single location, Rodriguez does not disclose content being received from a NOC as stated by Examiner, Applicants' invention is not an interactive television system, there is no EPG display that is separate from the primary display as in Kikinis's

invention, there is no way to contain Rodriguez's network in a portable enclosure, and there is nothing in the combination of Rodriquez, Specht and Kikinis that solves the congestion problem as Applicants' invention does with its satellite bypass of the internet. Therefore, Applicant requests reconsideration of claim 7.

The Examiner applies the same combination of Rodriguez, Specht, and Kikinis to Applicants' claim 8. In this instance, the Examiner states that "Rodriguez discloses a method for displaying content received from a NOC." As stated previously, in Rodriguez's system, the content flows from content provider to headend to DHCT, and not from a NOC. The examiner also states that Rodriguez "does discloses [sic] where the computer is contained in a portable enclosure." Rodriguez mentions nothing about portability. Moreover, Rodriguez's disclosure applies to a dispersed network of elements, not a single computer as described in Applicants' claim 8.

Examiner also cites Kikinis for disclosing "a method for notifying a user of an interactive event received by a handheld unit" and then states that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Kikinis's teaching to modify the combine method [of] Rodriguez and Specht by using a portable enclosure in order to provide an interactive television system that provides interactive functions and alerts a user of these interactive functions." Again, Applicants' invention of claim 8 is not an interactive television system – it is a method for receiving content from a NOC. This content is streaming IP over an internet broadcast network, not a cable operator's network. . Therefore, a combination that forms an interactive television system is not Applicants' invention. Moreover, Kikinis's invention teaches a portable display that is not the primary display, and so teaches away from Applicants'

invention. For these reasons, Applicants respectfully request that the Examiner reconsider and allow Applicants' claim 8.

Lastly, the Examiner rejected claim 5. Because Applicants have deleted this claim, the rejection is now moot.

Conclusion

For the foregoing reasons, Applicants submit that the Examiner's rejection the claimed inventions was incorrect and the claims should be allowed.

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